

# The Circulatory System

## Function -

1. Carry needed substances  
(Oxygen, nutrients, vitamins, hormones etc.) to your cells
2. carries away from your cells waste products (carbon dioxide)

## Parts -

- Heart - pump - cardiac muscle
- Blood vessels
  - 1. Arteries - carry blood away from the heart, thick muscular walls, highest blood pressure
  - 2. Veins - carry blood towards the heart, thinner walls, one way valves
- 3. Capillary - tiny, only one cell wide, here is where the exchange of O<sub>2</sub>, nutrients and waste products happens between your blood and cells

## Blood components

- 1. Red Blood Cells (RBC)  
hemoglobin - iron based protein that carries oxygen
- 2. White Blood cells (WBC)  
fight disease
- 3. Platelets - fragments of cells that help clotting and seal off holes in small blood vessels
- 4. Plasma - liquid part, mostly water

## Two circulation loops

Right side of heart  
pumps to lungs

Left side of heart  
pumps blood to the body

